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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE (Case No. 00-715-B)

In the Applic	cation of:)	
)	
Chad	A. Mirkin, et al.)	
)	Examiner: TBA
Serial No.:	10/716,829)	
)	Group Art Unit: 1656
Filed: Nov	ember 18, 2003)	•
	,)	Confirmation No. TBA
For: NAN	OPARTICLES HAVING)	
OLIC	GONUCLEOTIDES ATTACHED)	
THE	RETO AND USES THEREFOR)	

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

SIXTH SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Sir:

In order to comply with discretionary regulations 37 CFR §§1.97 and 1.98, attached hereto is Form PTO-1449, copies¹ of the documents listed thereon. These documents contain information which the Examiner may consider to be important in deciding whether to allow the present application to issue as a patent.

- 1. Merrill, et al., U.S. Patent No. 5,830,986, issued November 3, 1998.
- 2. Lough, et al., U.S. Patent No. 5,900,481, issued May 4, 1999.

¹To the extent that a document is listed and no copy of same is attached, then such document is not at the present time available to the undersigned or is available in the file of a parent application. If a listed document is not in the English language and an English translation is readily available, such translation is also attached; if translation is not attached it is not readily available to the undersigned. If a foreign language patent document is cited, and an English language equivalent is known to the undersigned, then such equivalent patent is also cited on the attached form along with the corresponding foreign language patent and a connecting arrow indicated therebetween; if no such English language equivalent is cited, then none is known to undersigned.

- 3. Goldberg, et al., U.S. Patent No. 6,203,989, issued March 20, 2001
- 4. Bawendi, et al., U.S. Patent No. 6,251,303, issued June 26, 2001.
- 5. Abbott, et al., U.S. Patent No. 6,277,489, issued August 21, 2001.
- 6. Bawendi, et al., U.S. Patent No. 6,306,610, issued October 23, 3001
- 7. Mirkin, et al, U.S. Patent No. 6,361944, issued March 26, 2002.
- 8. Wagner, et al., U.S. Patent No. 6,365,418, issued April 02, 2002
- 9. Mirkin, et al., U.S. Patent No. 6,417,340, issued July 09, 2002
- 10. WO 93/25709 published 23 December 1993.
- 11. WO 98/04740 published 5 January 1998
- 12. WO 98/17317 published 30 April 1998
- 13. WO 99/60169 published 25 November 1999
- 14. WO 00/33079 published 8 June 2002
- 15. WO 01/00876 published 4 January 2001
- 16. WO 01/51665 published 19 July 2001
- 17. WO 01/73123 published 4 October 2001
- 18. WO 01/86301 published 15 November 2001
- 19. WO 02/04681 published 17 January 2002
- 20. WO 02/18643 published 7 March 2002
- 21. WO 02/36169 published 10 May 2002
- 22. WO 02/46483 published 13 June 2002
- 23. WO 02/46472 published 13 June 2002
- 24. Letsinger, R., et al., "Chemistry of Oligonucleotide-Gold Nanoparticle Conjugates," *Phosphorus, Sulfur and Silicon*, Volume 144, p. 359-362 (1999)

- 25. Letsinger, R., et al., "Use of a Steroid Cyclic Disulfide Anchor in Constructing Gold Nanoparticle—Oligonucleotide Conjugates," Bioconjugate Chem, p. 289-291 (2000)
- 26. Li Z., et al., "Multiple thiol-anchor capped DNA-gold nanoparticle conjugates," *Nucleic Acids Research*, Volume 30, p. 1558-1562 (2002)
- 27. Nuzzo R., et al., "Spontaneously Organized Molecular Assemblies. 3. Preparation and Properties of Solution Adsorbed Monolayers of Organic Disulfides on Gold Surfaces, "J. Am Chem. Soc., Volume 109, p. 2358-2368 (1987)
- 28. Otsuka, H, et al., "Quantitative and Reversible Lectin-Induced Association of Gold Nonoparticles Modified with α -Lactosyl- ω -mercapto-poly(ethyleneglycol)," *J. Am Chem. Soc.*, Volume 123, p. 3226-8230 (2001).
- 29. Wuelfing, P, et al, "Nanometer Gold Clusters Protected by Surface-Bound Monolaters of Thiolated Poly(ethylene glycol) Polymer Electrolyte," *J. Am. Chem. Soc.*, Volume 120, p. 12696-12697 (1998)

In accordance with MPEP Sections 609 and 707.05(b), it is requested that each document cited (including any cited in applicant's specification which is not repeated on the attached Form PTO-1449) be given thorough consideration and that it be cited of record in the prosecution history of the present application by initialing on Form PTO-1449. Such initialing is requested even if the Examiner does not consider a cited document to be sufficiently pertinent to use in a rejection, or otherwise does not consider it to be prior art for any reason, or even if the Examiner does not believe that the guidelines for citation have been fully complied with. This is requested so that each document becomes listed on the face of the patent issuing on the present application.

The present Disclosure Statement is being submitted in compliance with 37 CFR 1.56 insofar as an Examiner might consider any of the cited documents important in deciding whether to allow the application to issue as a patent, but the citation of each document is not to be construed as an admission that such document is necessarily relevant or prior art. No representation is intended

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that the cited documents represent the results of a complete search, and it is anticipated that the Examiner, in the normal course of examination, will make an independent search and will determine the best prior art consistent with 37 CFR 1.104(a) and 1.106(b) and, in the course of each search, will review for relevance every document cited on the attached form even if not initialed.

Early and favorable consideration is earnestly solicited.

Dated:

Emily

Registration No. 35,285

Respectfully submitted,

McDonnell Boehnen Hulbert & Berghoff 300 South Wacker Drive

Chicago, Illinois 60606 Telephone: (312) 913-0001 Facsimile: (312) 913-0002

	FORM PTO-1449	U.S. Department of Commerce Pat nt and Trademark Office	Atty. Docket No.	Serial No.
	(Rev. 2-32)	rat iit allu Trauemark Onice	00-715-B	10/716,829
	INFORMATION STATEMENT B			
l	(Use several shee	ets if necessary)		
	O P E JC/100		Applicant:	
l	\		Chad A. Mirkin, et al.	
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١	THE CHIEF		November 18, 2003	1656

U.S. PATENT DOCUMENTS

Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate
	1.	5,830,986	11/03/98	Merrill, et al.	528	332	10/28/96
	2.	5,900,481	05/04/99	Lough, et al.	536	55.3	11/06/96
-	3.	6,203,989	03/20/01	Goldberg, et al	435	6	03/25/99
· · · ·	4.	6,251,303	06/26/01	Bawendi, et al.	252	301.4R	09/18/98
	5.	6,277,489	08/21/01	Abbott, et al.	428	403	12/04/98
	6.	6,306,610	10/23/01	Bawendi, et al.	435	7.1	09/17/99
	7.	6,361,944	03/26/02	Mirkin, et al.	435	6	06/25/99
	8.	6,365,418	04/02/02	Wagner, et al.	436	518	05/18/00
	9.	6,417,340	07/09/02	Mirkin, et al.	536	23.1	10/20/00

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	Document Number	Date	Country	Class	Subclass	Trans Yes	lation No	
Э.	WO 93/25709	23 December 1993	PCT					
l.	WO 98/04740	5 February 1998	PCT					
2.	WO 98/17317	30 April 1998	PCT					
3.	WO 99/60169	25 November 1999	PCT					
4.	WO 00/33079	8 June 2002	PCT					
	WO 01/00876	4 January 2001	PCT					
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U.S. PATENT DOCUMENTS

EXAMINER	DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.

FORM PTO-1449	U.S. Department of Commerce	Atty. Docket No.	Serial No.
(Rev. 2-32)	Patent and Trademark Office	00-715-B	10/716,829
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		Chad A. Mirkin, et al.	
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Examiner Initial	Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate
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FOREIGN PATENT DOCUMENTS

		Document Number	Date	Country	Class	Subclass	Trans Yes	lation No
	16.	WO 01/51665	19 July 2001	PCT				
	17.	W0 01/73123	4 October 2001	PCT				
20	18.	WO 01/86301	15 November 2001	PCT				
	19.	WO 02/04681	17 January 2002	PCT				
	20.	WO 02/18643	7 March 2002	PCT				
·	21.	WO 02/36169	10 May 2002	PCT				
<u>.</u>	22.	WO 02/46483	13 June 2002	PCT				
	23.	WO 02/46472	13 June 2002	PCT				

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc).

 24.	Letsinger, R., et al., "Chemistry of Oligonucleotide-Gold Nanoparticle Conjugates," <i>Phosphorus, Sulfur and Silicon</i> , Volume 144, p. 359-362 (1999)
25.	Letsinger, R., et al., "Use of a Steroid Cyclic Disulfide Anchor in Constructing Gold Nanoparticle—Oligonucleotide Conjugates," Bioconjugate Chem, p. 289-291 (2000)

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	INFORMATION DISCLOSURE STATEMENT BY APPLICANT		
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		Applicant:	
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Examiner Initial	Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate

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Document Number	Date	Country	Class	Subclass	lation No

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc).

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26.	Li Z., et al., "Multiple thiol-anchor capped DNA-gold nanoparticle conjugates," <i>Nucleic Acids Research</i> , Volume 30, p. 1558-1562 (2002)				
27.	Nuzzo R., et al., "Spontaneously Organized Molecular Assemblies. 3. Preparation and Properties of Solution Adsorbed Monolayers of Organic Disulfides on Gold Surfaces, " J. Am Chem. Soc., Volume 109, p. 2358-2368 (1987)				
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